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| 10/675,746 | 09/30/2003 | Brian KwangShik Hong | | 8008 |

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| EXAMINER |
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WONG, ALLEN C

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| ART UNIT | PAPER NUMBER |
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2621

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05/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/675,746 | Applicant(s) HONG ET AL. | |
| | Examiner Allen Wong | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see appeal brief, filed 1/24/08, with respect to the rejection of claims 6-13 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shimizu (EP 1 065 642 A2) for claims 6-8, and a rejection is made in view of Shimizu (EP 1 065 642 A2) and Tschia for claims 9-13.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu (EP 1 065 642 A2).

Regarding claim 6, Shimizu discloses a peripheral viewing system for a vehicle wherein said vehicle includes two opposing sides, a steering wheel positioned within a passenger compartment and a rear (fig.1, note Shimizu discloses a vehicle driving assist system for providing a peripheral viewing system in a vehicle 1, and that comprises a steering wheel 7 that is placed within the passenger compartment, and that vehicle has right side, left side and a rear, also see page 18, col.34, ln.12-15), the viewing system comprising:

a pair of cameras, one of said cameras mounted on one of said sides of the vehicle, another of said cameras mounted on another of said sides of the vehicle (fig.11, note there are cameras 10 located on the right (R) and left (L) sides of the vehicle; also on page 23, col.43, line 54 to col.44, line 7, in fig.21A, element 10L is a camera mounted on the left side of vehicle 1, and element 10R is the camera mounted on the right side of the vehicle 1);

a pair of video displays mounted within said passenger compartment, and positioned therein to be readily visible by a driver, each video display in selective communication with a designated one of said cameras (fig.12, Shimizu discloses there are a pair of video displays like fig.12(2), in that the left and right images are shown simultaneously for being readily visible to the driver where the left and right cameras 10 of fig.11 are used to communicate with the L and R displays as illustrated in fig.12 (2) and col.40, ln.49-55);

a microprocessor means in communication with each of said cameras and said displays for continuously processing images received from each of said cameras and for continuously transmitting said images to each of said displays (col.43, ln.32-38, note the use of parking assist ECU (electronic control unit) 76 in that it comprises a microprocessor as shown in fig.3 of the ECU 6, wherein fig.3 illustrates the use of a microprocessor or DSP 20 for communicating with the left and right cameras 10 of fig.19 so as to produce the left and right displays of the image data obtained by the left and right cameras, and in col.44, ln.23-30, note the images are simultaneously displayed, and that the system can be set to continuously check the broad area,

including the left, right and rear areas, of the images as transmitted by the left, right and rear cameras for continuously transmitting the images to the driver, as seen in fig.12 (2)-(4), in that multiple images from multiple cameras can be simultaneously displayed by continuously transmitting the image data obtained by the left, right and rear cameras).

Regarding claim 7, Shimizu discloses the peripheral viewing system according to claim 6 further comprising: a third camera mounted on the rear of said vehicle, said third camera connected to said microprocessor means (col.40, ln.45-47, fig.11, note element 10 located on back (B) of vehicle 1; also col.44, ln.5-7 and fig.21A, element 10B, and in fig.19, cameras 10 is connected to the ECU 76, wherein fig.3 illustrates the use of a microprocessor or DSP 20 for communicating with the left, right and rear cameras 10 of fig.19 so as to produce the left, right and rear displays of the image data obtained by the left, right and rear cameras); a third video display mounted within the vehicle passenger compartment, said third video display in selective communication with said third camera (fig.12(3)-(12), note "B" is located on the multiple display to signify the rear view of the camera located on the rear of the vehicle, along with the left (L) and right (R) views) via said microprocessor means for continuously depicting images behind said vehicle (col.44, ln.23-30, note the images are simultaneously displayed, and that the system can be set to continuously check the broad area, including the left, right and rear areas, of the images as transmitted by the cameras).

Regarding claim 8, Shimizu discloses further comprising a warning means for alerting a driver of an approaching vehicle (col.43, ln.32-38 and col.44, ln.18-22; Shimizu discloses the alarm is displayed to warn the driver of approaching vehicle).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (EP 1 065 642 A2) in view of Tsuchiya (5,530,420).

4. Regarding claim 9, Shimizu does not specifically disclose wherein said warning means comprises:

a phototransistor mounted on each side of said vehicle, adjacent the rear thereof, each of said phototransistors electrically connected to said microprocessor means; an audible alarm means electrically connected to said microprocessor means for audibly alerting a driver if said phototransistors detect a trailing vehicle within a predetermined range of said vehicle. However, Tsuchiya teaches the use of a vehicle detection means for alerting a driver of an approaching vehicle (fig.1, element 100 is an vehicle detection means that utilizes the image information from cameras 11a and 11b, speed sensor 4, and other photoelectric sensors for detecting the approaching vehicle, wherein sensors are utilized for determining if the approaching vehicle is at a safe distance or range). Since Tsuchiya provides the warning means, it would have been obvious to one of

ordinary skill in the art to apply audible alarm means for performing the task of alarming or providing a sound warning the driver of approaching vehicles so as to avoid potentially colliding with the approaching vehicles and preventing accidents. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Shimizu and Tsuchiya, as a whole, for providing the driver pertinent information about approaching vehicles so as to drive at a safe distance and to prevent the occurrence of accidents (Tsuchiya col.1, ln.47-54).

Regarding claim 10, Shimizu does not specifically disclose further wherein said vehicle includes a turn signal switch means electrically connected to said microprocessor means for exclusively activating said audible alarm means if said trailing vehicle is within the predetermined range of said vehicle. However, Tsuchiya teaches the use of a vehicle detection means for alerting a driver of an approaching vehicle (fig.1, element 100 is an vehicle detection means that utilizes the image information from cameras 11a and 11b, speed sensor 4, and other photoelectric sensors for detecting the approaching vehicle, wherein sensors are utilized for determining if the approaching vehicle is at a safe distance or range). Since Tsuchiya provides the warning means, it would have been obvious to one of ordinary skill in the art to apply audible alarm means for performing the task of alarming or providing a sound warning the driver of approaching vehicles so as to avoid potentially colliding with the approaching vehicles and preventing accidents. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Shimizu and Tsuchiya, as a whole, for providing the driver pertinent information about approaching vehicles so as to

drive at a safe distance and to prevent the occurrence of accidents (Tsuchiya col.1, ln.47-54).

Regarding claim 11, Shimizu does not specifically disclose wherein each of said cameras is encased within a contoured, aerodynamic housing to minimize wind drag. However, it would have been obvious to one of ordinary skill in the art to encase the cameras in any form as needed or suited by design choice since encasing cameras into aerodynamic, protective cases is a well known practice for shielding cameras and providing sensible forms of concealing cameras so as to not slow down the speed of the vehicle.

Regarding claim 12, Shimizu discloses the implementation of multiple displays within the vehicle (fig.12, Shimizu discloses there are multiple video displays like fig.12(2), in that the left and right images are shown where the left and right cameras 10 of fig.11 are used to communicate with the displays as illustrated in figs.12 (2)-(12) and col.40, ln.49-55; also fig.21B, Shimizu discloses that the displays are mounted within the passenger compartment for being readily viewable to the driver when driving, and that fig.21B shows a multiple video display of the image data obtained by the camera units 10L, 10B and 10R). Shimizu does not specifically disclose wherein one of said displays is positioned immediately adjacent a first side of the steering wheel and another of said displays is positioned immediately adjacent an opposing side of the steering wheel. However, it would have been obvious to one of ordinary skill in the art to place the displays in any location on Shimizu's vehicle as desired by the user for conveniently viewing the displayed information so as to drive carefully with all of the

necessary, precise video information of the perspectives obtained by the cameras in order to prevent accidents.

Regarding claim 13, Shimizu discloses wherein the third camera is immediately adjacent a top edge of a rear window on the vehicle for replacing a conventional rear view mirror (fig.1, note element 10 can be placed on top edge of rear window for obtaining the vehicle's rear image data).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Allen Wong/
Primary Examiner, Art Unit 2621
/John W. Miller/
Supervisory Patent Examiner, Art Unit 2623

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Primary Examiner
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AW
5/16/08